

## Description of a New Genus and a New Species of Bruchidae from South America (Coleoptera)

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### ABSTRACT

*Penthobruchus*, new genus, is described for *Pachymerus germaini* Pic and a new species, *cercidicola*, both from South America. Illustrations of salient characters are included.

The bruchid described as *Pachymerus germaini* by M. Pic and the new species described herein cannot be placed in any described genus, therefore it is necessary to erect a new genus for them.

### *Penthobruchus*, new genus

Body depressed above, elongate; eyes protruding, posterior margin of ocular lobe nearly transverse; antennal segments 5-11 transverse; lateral carina of pronotum lacking; pronotal disk evenly convex laterally, nearly flat in middle, not gibbous; latero-basal umbones present but not prominent. Elytral striae 3 and 4 slightly distorted and bent laterad in basal one-fourth and ending in low umbo, occasionally with tooth at base of each stria on umbo; stria punctures shallow, stria rows indistinct. Pygidium with pair of bare, depressed submarginal spots near apex. Hind femur with apex extending beyond apex of pygidium, latero-ventral margin with 12-14 short teeth and separated by polished channel from pecten on meso-ventral margin with 6-9 long teeth, anterior tooth 1.5 times as long as any one of the posterior teeth; hind tibia strongly arcuate and fitting into ventral channel of femur during flexion, lateral carina of tibia complete, intermediate and ventral carinae nearly on same plane on ventral margin, mucro short, coronal teeth lacking, apical margin diagonal, dorsal face of tibia scabrous.

*Type-species.*—*Pachymerus germaini* Pic.

*Penthobruchus* is closely related to *Pygiopachymerus* Pic, but with the following differences: postocular lobe laterally, not posteriorly produced (Fig. 8) causing the head in *Penthobruchus* to appear strongly constricted behind eyes; striae 3 and 4 and occasionally 2 with bases ending in minute subbasal tubercles in *Penthobruchus*, but ending in basal concave ridges in *Pygiopachymerus*; intervals of elytra smooth in *Penthobruchus* but strongly scabrous basally and laterally in *Pygiopachymerus*; striae of elytra obsoletely impressed in *Penthobruchus* but deeply impressed in *Pygiopachymerus*. The characteristic lateral processes of the median lobe in the male genitalia in *Pygiopachymerus* (Kingsolver, 1970, figs. 7 and 10) are lacking in *Penthobruchus*.

From other species and genera in the Bruchinae having a definite, serrate latero-ventral carina on the hind femur, *Penthobruchus* can be separated by its

nearly flat pronotal disk (not strongly gibbous), by the nearly obsolete striae impressions, by the obsolete umbo at the bases of striae 3 and 4, and by the short mucro. In certain species of *Caryedes* Hummel and related groups, the latero-ventral margin of the hind femur may bear scattered small denticles, but these are not on the crest of a carina.

The name *Penthobruchus* refers to the generally melancholy appearance of the two species included.

*Penthobruchus germani* (Pic), new comb.

*Pachimerus* (sic) *germani* Pic, 1894, p. 65; Hoffmann, 1945, p. 94.

*Pseudopachimerus germani*: Pic, 1938, p. 19; Pic, 1913, p. 11.

*Caryedes germani*: Blackwelder, 1946, p. 758; Teran, 1962, p. 232 (misidentification).

Color.—Body usually piceous, sometimes reddish in general specimens; antennae ranging from all red to having basal 4 and terminal segments red and segments 5–10 piceous; fore and middle legs reddish with dark blotches on femur, hind leg black with reddish tarsal segments. Vestiture of black, white, yellowish gray, and golden brown hairs arranged in distinctive pattern on elytra and pygidium (Fig. 5, 6). Head with vestiture brown on vertex, yellowish gray on frons, postgena, and ocular lobe. Pronotum with vestiture mixed brown and gray on disk and ventral areas, broad grayish stripe along lateral margin of disk. Elytra with vestiture of mottled black, golden brown, and yellowish gray setae in somewhat mottled, quite variable pattern, a velvety black elongate spot at middle of third interval surrounded by grayish hairs, and a smaller black spot on fifth interval opposite anterior end of spot on third interval, latero-apical and humeral areas dark brown or black. Pygidium of ♂ and ♀ with evenly distributed yellowish gray vestiture, but ♀ with a pair of depressed apical submarginal spots, a pair of median spots which are elongate and usually joined across midline, and a pair of small basal spots (Fig. 6). Venter of body with vestiture gray mottled with darker spots. Hind femur with vague transverse bands formed of gray hairs.

Head with eyes protruding, each eye 1 1/2 times as wide as width of frons, frontal carina prominent, shining; antennae with segments 1–4 moniliform, 5–11 eccentrically produced.

Pronotum with disk convex but with slight median channel; apical 1/2 of pronotum somewhat compressed; latero-basal umbones low, rounded; ratio of length to width of pronotum 4.5.

Elytra together slightly longer than wide, quadrangular, depressed medially, depression flanked by low rounded costa extending diagonally from humerus of each elytron to apex of 6th interval; bases of 3rd and 4th striae ending in low umbo which

is occasionally armed with 1 or 2 denticles; striae not strongly marked except in middle of disk.

Pygidium of ♂ vertical, evenly convex except for paired subapical depressions, of ♀ sloping, convex except for subapical depressions as in ♂ and a semicircular depression at extreme apex.

Prosternum short, fore coxae contiguous for 3/4 of their length; mesepisternum arcuate on posterior margin, mesepimeron reduced to narrow strip medially.

Hind coxae narrow, transverse, densely and finely punctate, and densely setose on face, hind femur extending beyond apex of pygidium.

Male genitalia (Fig. 3, 4) short, broad; ventral valve acute, broad at base, with a row of setae along posterior border; dorsal valve acute, bifid at base, depressed medially; armature of internal sac consisting of a large rounded, hollow median sclerite bearing a dorsal keel; apical 1/2 of sac with large, paired, minutely spinose leathery plates; gonopore valve ringlike. Lateral lobes short, broad, obliquely truncated apically, cleft for 1/2 their length.

Female genitalia with valves short, 8th sternite as illustrated by Teran, 1962, fig. 123; lining of bursal neck with about 40 elongated denticles arranged in circle with apex of each denticle directed anteriorly.

Body length: 4.5–5.0 mm. Maximum body width: 3.5–4.0 mm.

*Holotype*.—Holotype ♂ deposited in Museum National d'Histoire Naturelle, Paris. Label data: Type des Pampas, chasse Germain; *Pachimerus germani*, Jekel, Bras. I am grateful to Mme. A. Bons for the loan of this type.

*Geographical Distribution*.—CHILE: Santiago. ARGENTINA: States of Santa Fe and Buenos Aires. Introduced and perhaps established for a short time in Paris. Pic (1913) lists it as introduced into Germany. Since this species was confused with the following new species by Teran (1962), the locality records listed by him must be rechecked.

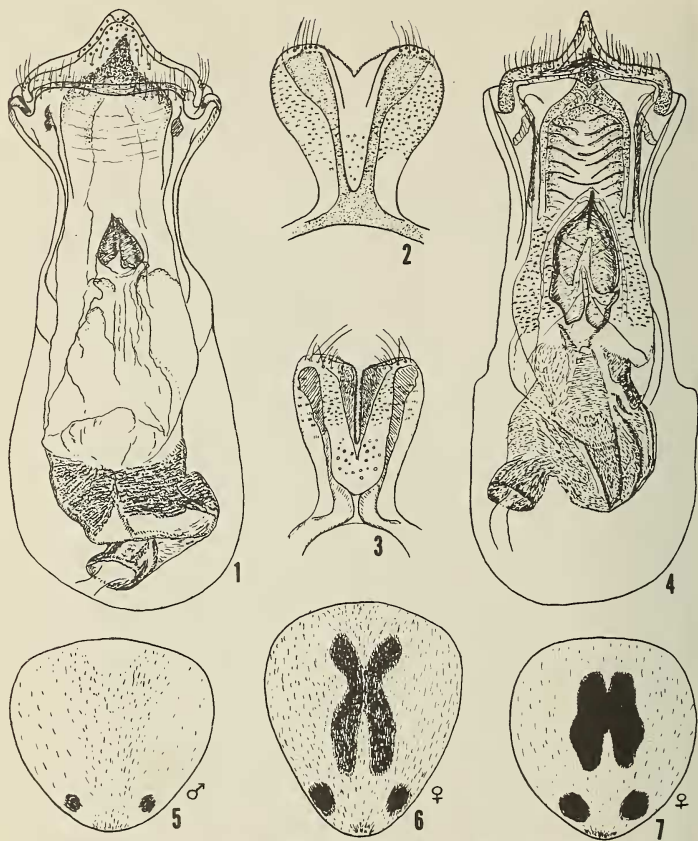
*Host*.—*Parkinsonia aculeata* L. Although the host is distributed widely in tropical and subtropical America by its cultivation as a medicinal and ornamental tree, *P. germani* apparently attacks it only in Argentina and Chile.

The differences between this species and the next will be discussed with the latter.

*Penthobruchus cercidicola*, new species

*Caryedes germani*: Teran, 1962, p. 232.

Teran has published an excellent morphological description of adult and larva

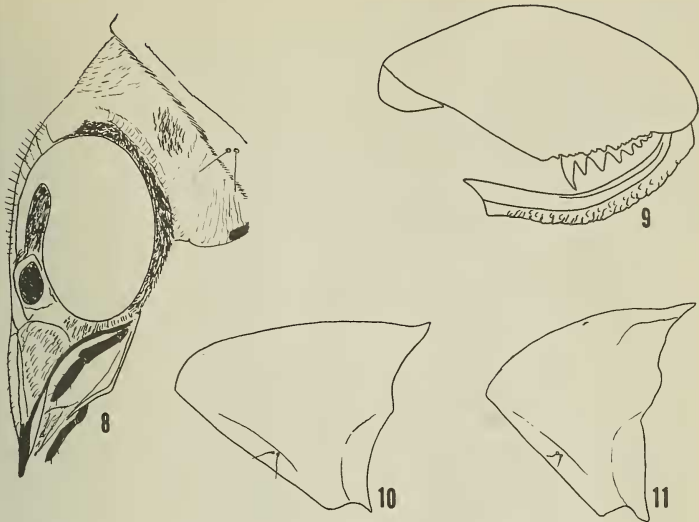


*Pentobrychus*. Fig. 1-4. Male genitalia. Fig. 1, *P. cercidicola*, median lobe, ventral. Fig. 2, *P. cercidicola*, lateral lobes, ventral. Fig. 3, *P. germani*, median lobe, ventral. Fig. 4, *P. germani*, lateral lobes, ventral. Figs. 5-7, pygidia. Fig. 5, *P. cercidicola* and *germani*, male. Fig. 6, *P. germani*, female. Fig. 7, *P. cercidicola*, female.

of this species under the name of *C. germani*, and there is no need to duplicate it here.

The two species are quite similar in general appearance but with the following differences:

1. In *germani*, the anterior half of the pronotal disk is flanked by obsolete costae marking the dorsal margins of broad depressions on the lateral faces of the pronotum, in dorsal view appearing pinched. In *cercidicola*, the disk is



*Penthobruchus*. Fig. 8, *P. germaini*, head, lateral. Fig. 9, *P. germaini*, hind leg. Fig. 10, *P. cercidicola*, pronotum, lateral. Fig. 11, *P. germaini*, pronotum, lateral.

evenly convex and without costae, or prominent lateral depressions. 2. In lateral view, the dorsal profile of the pronotum in *germaini* is convex throughout its length, but in *cercidicola* the posterior three-fourths of the profile is nearly flat, the anterior one-fourth strongly convex (Fig. 10, 11). 3. The average gross size is larger in *germaini* 4.5–6.0 mm.; in *cercidicola* 3.0–3.5 mm. 4. In ♂ genitalia, the median sclerite of the internal sac in *germaini* is larger (Fig. 4) as is the dorsal valve, the ventral valve is acute, and the lateral lobes are truncated; in *cercidicola*, the median sclerite is small, the dorsal valve is short and broad, the ventral valve is bluntly rounded, and the lateral lobes are rounded apically.

Coloration and intensity of pattern in the two species is quite variable and offer no definite recognition characteristics. Body length: 3.0–3.5 mm. Maximum body width: 1.6–2.0 mm.

Holotype ♂, allotype ♀, paratypes, 1 ♂, 2 ♀; ARGENTINA, prov. Tucuman, Tapia, 25–VII–1957, A. Teran, in seeds of *Cercidium australe*. Additional paratypes: prov. Buenos Aires, Conesa, 15–IX–1943, Paul Berry, 3 ♂; same data except 20–II–43, 2 ♂, 4 ♀; specimens intercepted US Dept. Agric. Plant Quarantine, Washington, D. C., A7316, 17–X–1929, in seeds of *Caesalpinia praecox* (now *Cercidium australe*), 12 ♂, 10 ♀.

The type and paratypes are deposited in the collection of the Fundacion Miguel Lillo, Tucuman, Argentina. Allotype and paratypes are deposited in the U. S. National Museum. Paratypes are deposited in collections of the Canadian National Collection, Ottawa, and the British Museum, London.

The type and allotype were selected from material included in the description by Teran.

The name *cercidicola* means feeding on *Cercidium*.

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